

WHAT IS CLAIMED IS:

1. An interface unit for a main unit which connects a key telephone to a telephone network in a key telephone system, comprising:

5 a communication section configured to communicate data with the key telephone by either of first and second transmission schemes;

10 a model determination section configured to determine whether the key telephone is compatible with both of the first and second transmission schemes or only the first transmission scheme; and

15 a selection section configured to select the first transmission scheme when the key telephone is compatible with only the first transmission scheme, and select the second transmission scheme when the key telephone is compatible to both of the first and second transmission schemes.

20 2. The interface unit according to claim 1, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

25 3. The interface unit according to claim 1, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

4. An interface unit for a main unit which

connects a key telephone to a telephone network in a key telephone system and exchanges data with the key telephone by either of the first and second transmission schemes, the interface unit comprising:

5 a transmitter configured to transmit a mode inquiry to the key telephone by the first transmission scheme; and

 a mode controller configured to change the transmission scheme to the second transmission scheme upon reception of a response from the key telephone.

10 5. The interface unit according to claim 4, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

 6. The interface unit according to claim 4, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

15 7. An interface unit for a main unit which connects a key telephone to a telephone network in a key telephone system and exchanges data with the key telephone by either of the first and second transmission schemes, the interface unit comprising:

20 a transmitter configured to transmit a mode inquiry to the key telephone by the first transmission scheme; and

a mode controller configured to keep the first transmission scheme unchanged when no response is received from the key telephone in a predetermined period of time.

5 8. The interface unit according to claim 7, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

10 9. The interface unit according to claim 7, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

15 10. A key telephone capable of being connected to a telephone network through a main unit, comprising:

a receiver configured to receive a mode inquiry from the main unit by a first transmission scheme;

20 a transmitter configured to transmit a reply to the mode inquiry to the main unit by the first transmission scheme;

a mode controller configured to change the transmission scheme to the second transmission scheme in accordance with an instruction from the main unit.

25 11. The key telephone according to claim 10, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

12. The key telephone according to claim 10,

wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

5

13. A key telephone system comprising:

a key telephone; and

a main unit which inquires of said key telephone about a transmission scheme, and determines a data transmission scheme between said main unit and said key telephone on the basis of a reply.

10

14. The key telephone system according to claim 13, wherein said main unit comprises:

a communication section configured to communicate data with the key telephone by either of first and second transmission schemes;

15

a model determination section configured to determine whether the key telephone is compatible with both of the first and second transmission schemes or only the first transmission scheme; and

20

a selection section configured to select the first transmission scheme when the key telephone is compatible with only the first transmission scheme, and select the second transmission scheme when the key telephone is compatible to both of the first and second transmission schemes.

25

15. The key telephone system according to

claim 14, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

5 16. The key telephone system according to claim 14, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

10 17. The key telephone system according to claim 14, wherein said main unit comprises:

a transmitter configured to transmit a mode inquiry to the key telephone by the first transmission scheme; and

15 a mode controller configured to change the transmission scheme to the second transmission scheme upon reception of a response from the key telephone.

20 18. The key telephone system according to claim 17, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

25 19. The key telephone system according to claim 17, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

20. The key telephone system according to claim 17, wherein said main unit comprises:

a transmitter configured to transmit a mode inquiry to the key telephone by the first transmission scheme; and

a mode controller configured to keep the first transmission scheme unchanged when no response is received from the key telephone in a predetermined period of time.

21. The key telephone system according to claim 20, wherein the second transmission scheme is higher in transmission rate than the first transmission scheme.

22. The key telephone system according to claim 20, wherein the first transmission scheme includes a fixed transmission pattern for control data, and the second transmission scheme includes a transmission pattern selected from a plurality of patterns for the control data.

23. A data transmission scheme determination method in a key telephone system including a key telephone and main unit, comprising:

setting the main unit and key telephone in a first transmission scheme at an initial time;

causing the main unit to transmit a transmission scheme inquiry to the key telephone;

causing the key telephone to return a response

upon reception of the inquiry; and

causing the main unit to determine a data
transmission scheme in accordance with contents of the
reply upon reception of the reply and instruct the key
5 telephone to change the transmission scheme to the
determined data transmission scheme.

24. The method according to claim 23, wherein the
second transmission scheme is higher in transmission
rate than the first transmission scheme.

10 25. The method according to claim 23, wherein the
first transmission scheme includes a fixed transmission
pattern for control data, and the second transmission
scheme includes a transmission pattern selected from a
plurality of patterns for the control data.

09993708.113704
T02277 8046660